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An Essay

on

Phthisis Pulmonalis

by Lewis Shinger

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W. E. H.

as early

William Johnson

of Lewisburg

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to J. H.

Phthisis Pulmonalis

Under this term, which signifies merely emaciation or wasting, have been included diseases essentially differing from each other, as well in their anatomical characters as in their mode of treatment. By *Phthisis Pulmonalis*, or as it is more correctly called tubercular consumption, we now understand a disease differing in its real nature from all other pulmonary affections;—a disease originating in the formation of foreign bodies in the cellular membrane of the lungs, called *tubercles*.

According to Laccaze the tubercles when first discoverable in the lungs, are seen in the form of "semitransparent grains, greyish or colourless, and varying in size from that of a millet

to that of a lump seed." These he calls
"milliary tubercles". In the progress of
the disease these bodies gradually in-
crease in size and become opaque.

A yellow spot is seen in the centre,
which gradually proceeds towards
the circumference and finally ex-
tends throughout the whole mass. In
this stage which he calls the "crust or
immature", they have a consistence
about equal to that of firm cheese.
These tubercles after an indefinite
period of time, gradually soften
and finally liquify. This process,
like that of the discoloration, com-
mences at the centre and gradu-
ally proceeds to the circumference.

The softening of these masses
produces two kinds of matter,
differing considerably in their

appearance, the one, in colour and consistence, resembling thick mucus, and the other a thin fluid, colourless or tinged with blood, having a portion of soft tuberculous matter floating in it. This latter has a striking resemblance to common whey containing portions of curd.

The matter thus formed gradually makes its way into some of the ramifications of the bronchia and is discharged by expectoration. As these bodies are usually developed in considerable numbers in the same portions of the lungs, they frequently unite forming one continuous mass, which sometimes extends from one extremity of the lung to the other. These extensive col-

sections when softened are rapidly discharged, the matter being coughed up by mouthfuls. These discharges constitute what are called *comitae*. After a push of matter of this description the discharge gradually diminishes, and either finally ceases, or continues in form of a chronic catarrh.

After these *comitae* have emptied themselves of their contents they become lined with a soft white membrane. This remedial process of nature relieves the patient from most of his distressing symptoms, a chronic catarrh only remaining. The expectoration which remains in these cases, Laennec supposes, "is secreted in part by this new-formed membrane, but more abundantly by the living membrane of the bronchia,

irritated by the passage of the tuberculous matter.

If no more tubercles are developed and the disease remain long stationary, a cartilaginous lining is formed under the above described membrane, and seems continuous with the lining membrane of the bronchial tubes. The sides of these excavations occasionally adhere and finally cicatrize, and in these cases, if there exist no more of these bodies in the substance of the lungs, the patient is eventually cured.

The development of tubercles is not confined to the lungs alone, but occurs simultaneously in other parts of the body, particularly the coats of the intestines, and to this cause has been ascribed the diarrhoea which accompanies



certain stages of the disease.

Tubercular phthisis is now generally conceived to be a disease inseparably connected with a hereditary predisposition, "the seeds of which are complicated with the *stamina vite*." Yet although its origin is connected with that of our existence, it may lay dormant for a great length of time, even during the period of the longest life. This opinion seems to be substantiated by the fact that the disease very rarely occurs in mild and equable climates. For we cannot but observe the inhabitation of such countries in some degree (be it so) to this disease as well as those of more inclement regions. Although no description of

Persons are exempt from this disease; yet there are certain conformation which seem to predispose to it, or rather to point out that predisposition. Hence it is generally found associated with a narrow chest, long neck, light hair, fair skin, blue eyes, florid complexion, great sensibility, and considerable acuteness of mind. It also frequently occurs in several members of the same family.

Among the sympathies existing between the various organs of the body, none perhaps is more strongly marked than that between the skin and lungs. So intimate is this consent of parts, that whatever morbid impression is made upon the former, in a greater or less degree exerts its influence upon the latter. Hence



among the most frequent exciting causes of phthisis, are those which exert their influence through the medium of the skin: as sudden changes of temperature, exposure to cold and moisture; irregularities in exercise. The ill effects of the last are most plainly manifested. It also seems occasionally to be excited by irritating substances inhaled into the lungs: since millers stone cutters, and weavers, spinners &c. are peculiarly liable to the disease. Diseases of the neighbouring organs frequently become exciting causes of phthisis: as enlargement or inflammation of the liver or spleen, obstructions of the mesenteric glands, affections of the stomach, intestines &c. As these may be added the impatience of accustomed

discharges: as in the healing of old
ulcers the an i p e r s i o n or ce f a t i o n
of the catamenia, the cure of hemor-
rhoidal discharges &c. And finally,
whatever unawakenly excites or de p r e s s e s
the system: as equal in eating or
drinking, inordinate exercise, ex c e s s i v e
merry &c. &c.

"It appears to me," says Dr. Anthon, "
that the first change which indicates the
approach of phthisis ac. to be found in
the skin. The colour of the cheek is al-
ways become paler and more deli-
cate than before, while that of the
lips is often of a brighter red. By
looking steadily on the face
of the patient for some time the
colour will be observed to come
and go in a surprising manner.
A beautiful bloom will be spread

for a moment over some part of the
cheeks, and then receding will leave
a remarkable pallidity, almost ap-
proaching to whiteness."

It is evident that the above sym-
ptoms will rarely be attended to. They
will go unnoticed, by the friends of
the patient, and the practitioner will
seldom be called in time to detect them.
The first symptom which usually attracts
attention is a slight hacking cough:
this insensibly creeps upon the patient,
and gradually becomes harsh and
more fatiguing. Examined at this pe-
riod, the pulse will be found accel-
erated especially after meals; the sur-
face becomes pale, and the superfi-
cial veins distended and prominent.
A sense of weight is felt in the chest,
and the respiration becomes hurried

by the least exertion. at this period the cough is either dry, or attended with the expectoration of a transparent or frothy mucus interspersed with grey or black specks. The hair assumes a dull appearance and becomes unmanageable, refusing to remain in a proper position. The conjunctiva becomes of a pearly whiteness, and the eye assumes a sparkling appearance. The tongue is redder than natural; the heat of the surface is irregular, and even some degree of perspiration may be perceived during sleep.

In the progress of the disease most of the above symptoms become aggravated. A pain is felt in the thorax, which is aggravated by inspiration particularly in the horizontal posture; the pulse becomes quicker and harder; the fever increa-

us with evening exacerbations and finally assumes the true hectic type. The cough and difficulty of breathing grow worse, and the soles of the feet and palms of the hands become affected with burning heat.

The expectoration which had previously consisted of a transparent mucus is now either suddenly or gradually changed to a matter resembling thin lime opake of a pale yellow or greenish colour, somewhat tenacious, often containing portions of tuberculous matter, and occasionally streaked with blood.

This change in the character of the expectoration evidently depends on the increasing and discharge of tubercles. If they be so numerous as to disorganize a considerable portion of lung, the symptoms will sink rapidly, and death

will ensue in a short time. But if
they are of small extent and few in num-
ber, and if at the same time there exist
none in an immature state, the irrita-
tion will gradually diminish and fi-
nally cease altogether and a cure is ef-
fected. More commonly, however, the cells
are only temporary, a second growth
of these extraneous bodies undergoes
the same change marked by the same
symptoms until, finally the cancer be-
come is for destroyed. But the patient
must necessarily die. The successive
growth, maturation and discharge of
these bodies, give to the disease its in-
termitting character.

"When ichthium is regularly established,"
says Dr. Johnson, "it forms one of the most dis-
tressing pictures which the human frame ex-
hibits in its progress to corruption. The

hectic blush on the cheeks, the vermilion
 lips, the burning heat in the palms of the
 hands and soles of the feet, with evening
 fever. periodically change (for cold)
 colligative sweats, hollow voice, emaciated
 countenance, sharpening features, aug-
 mented expectoration, and progressive ex-
 citation. Such is the series of heart-
 rending symptoms, which are daily pre-
 sented to the agonized friends, whose mi-
 serable is heightened by the never-dying hope
 which perpetually springs in the hectic heart.
 Whether it is that the delicate organization
 which pre-disposes to this destructive dis-
 ease, contributes to amiability of tem-
 per and sweetness of disposition is doubt-
 ful; but certain it is that the malady
 in question, falls, in general on the best,
 or, we may say, the conscientious of association."

In ascertaining the true charac-



ter of pectoral diseases no means of investigation yet known seems to aid, in-
er to become truly useful than the ex-
am of Dr. Laennec. But unfortunately it
seldom affords any aid in the detection
of tubercles until it is beyond the reach
of medicine. "When the tubercles are con-
fined in one spot," says he, "so as to form a
considerable mass the respiration is inaid-
able in the part and percussive gives it
a dull sound." This however, he remarks,
must be considered as a very rare case. But
when the second stage of the expectoration
various, if recourse be had to the stetho-
scope incipient pectoral disease will
be discovered. This will daily become
more evident, and sometimes even at
the end of a few days will be complete.
This sign he thinks should be consid-
ered as its pathognomonic of

1872.

As it is perhaps impossible to arrest the progress of this disease once established, it becomes an object of the first moment to arrest this progression from being dangerous to action. To arrest this end the most efficacious means is, doubtless, to send the patient to a warm climate. And this should be done in every case where the circumstances of the patient are such as to warrant it.

But the condition of a great majority of persons afflicted with this complaint, excludes them from the advantages of such a measure. In such cases it becomes the duty of the practitioner to use every possible means to arrest the disease, or to conduct it to a reasonable issue.

On the treatment of consumption
new section was formerly resorted to
a very considerable extent. But since
the diseased action has been ascertained
to differ essentially from the pro-
cess of ordinary inflammation, this prac-
tice has been in a great measure
abandoned. A kept down inflammatory
action, particularly in the forming
stage of phthisis, bleeding and espe-
cially the local abstraction of blood
from the chest, is often highly useful,
and sometimes indispensable.

Hot lozenges should be employed
so as to keep the bowels in a docile
state, and prevent irritation from
the accumulation of feculent
matter. Active purging, however, should
be avoided, as it has a tendency to
arrest the action of the skin. Further

would no doubt impose in this case, from
its known action on the skin. It is said
that Dr. Whipple has obtained the most sa-
tisfactory results from the use of sal-
lure in this disease even when given
in such moderate dose as to produce
no sensible effects.

On the commencement the
diet should be light and easy of di-
gestion. The best articles are, perhaps, the
different kinds of Grains, milk,
and light animal matters. The opor-
tunes milk has been preferred by Eu-
ropean practitioners.

Emetics have usually been given in
the commencement of Ecthima, principally
with a view of determining to the surface.
They no doubt act bene-^{fic}ially in this
way, but would not ~~be~~ ^{be} equally so-
lutory, and certainly be unpleasant to

the patient) be obtained, from small and frequently repeated doses of but not a Sp. acuminata. To the same end particular attention should be paid to the dress of the patient. This should be regulated so as to protect him from the influence of sudden changes of temperature, and to keep up a gentle action on the surface. To this purpose he should wear flannel next the skin, especially during the winter season. This should be frequently changed, and the suit should be kept dry and warm. The patient should use moderate exercise in good weather, should retire to bed and rise early, and all excesses should be carefully avoided.

No remedy, perhaps, has been more universally resorted to in this disease than local irritation on the surface.



For this purpose various means have been resorted to, as blisters, setons, issues, catenetic instrument, dry cups, &c. &c. These remedies have been employed not only in the forming stage but during the whole progress of the disease. Some very remarkable cures are recorded by Barron & Carey effected under circumstances apparently disparate, through the agency of the mofa. When blisters are applied to the chest, they are usually made small and often repeated, a slight discharging by some stimulating ointment.

This mode of irritation Dr. Armstrong thinks preferable to a perpetual seton or issue. He supposes their good effects arise, more from the irritation produced than from the discharge.

These are the remedies usually employed in the early stage of ^{the} inflammation.



In the more advanced stages the depleting measures must be laid aside, and even some aid must be lent to the support of the system. The extreme debility, the colligative diarrhoea, and the profuse nocturnal perspirations all call for immediate attention. A more generous diet must be allowed, and occasionally fermented liquors or wine will be found advantageous. Opium should be given to check the profuse alvine discharges and quiet irritation; and opium in combination with saccharum saturni will be found useful in checking perspirations.

Imnumerable articles have at different times been highly extolled, and even set up as specifics in the cure of consumption. Which, however,



in a more deliberate investigation,
have been found no farther useful
than as general remedies; and as yet
we know of no specific. Digitalis may
be mentioned as an instance of this
kind; and notwithstanding the praises
which were lavished upon it at one
time, it has almost fallen into disuse.
Yet digitalis from its known powers
in calming irritation, and reducing
the action of the heart and arteries,
may no doubt be advantageously
employed in the early stage of the disease.

The prussic acid has been re-
commended pretty much with the
same view. Its powers in allaying
pain and tranquilizing the system
are no doubt very considerable: but
being a most virulent poison, and a
very hazardous remedy, even when

given with the greatest caution, its employment has been very limited in this country.

"Oxalic acid and the vapour of tar" says Dr. Johnson "have evaporated into air thin air". Yet notwithstanding this assertion, the inhalation of the vapour of tar has proved beneficial in many cases.

Dr. Johnson, from observing the benefits resulting to Athysical persons from the accidental occurrence of a hemorrhoidal discharge, suggests the propriety of an attempt to establish it artificially, by leeches applied to the verge of the anus and the use of elastic surges.

